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ABSTRACT

An education price index for elementary and secondary education in Canada was needed to determine what portion of expenditure growth was caused by changing prices, as opposed to the quantity and/or quality of inputs purchased. The primary objective was to construct a statistical measure that would permit expenditures on education to be deflated. Using the statistical technique of deflation, pure price change is identified first, then change in the quantity and/or quality of education inputs can be established as residuals. Following more than one year of consultation with potential major users, a methodology was selected. This document presents the background for the publication of price indices of elementary and secondary education and describes the detailed methodology. The following elements are discussed: the population concerned, the reference period, the items of the index and their weights, the price variations, the formula and the calculation of the index, and the teachers' salaries subindex. (Author/MLF)

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Statistics Canada

Education, Science and Culture Division

Education Price Index

Elementary-Secondary Level

Methodological Report

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Preface

The purpose of this publication is to present in detail the methodology used in constructing the new education price index at the elementary-secondary level.

This document is a logical complement to the Education Price Index recently published by Statistics Canada in the service bulletin catalogue no. 81-002, Vol. 1, no. 1.

The preparation of this report was undertaken in the Education, Science and Culture Division of Statistics Canada, under the direction of Yves Dupuis, with major contributions from representatives of the Prices Division.

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INTRODUCTION

I. Introduction

In spite of a constant decrease in school enrolment since 1970-71, expenditures on elementary-secondary education have grown at an average annual rate of 11.6% and are expected to total more than 13 billion dollars in 1979-80. Among the many factors which may explain this situation, there is one upon which agreement is unanimous: inflation.

Since there was no adequate means of determining what portion of expenditure growth was caused by changing prices, as opposed to the quantity and/or quality of inputs purchased, the need for an education price index has frequently been documented.

Among those organizations voicing concern were the Canadian School Trustees' Association (CSTA) and the Organization for Economic Cooperation and Development (OECD). The Trustees' Association commissioned a study(1) recommending the construction of an educational price index using price data already collected by Statistics Canada. In this connection, the OECD, given the opportunity of reviewing educational policies in Canada, in 1975, said: "Statistics Canada might wish to consider the construction of a more precise set of education-cost indicators, tailored not only to the major inputs purchased by educational institutions but also to each of the major levels of education. This would greatly improve the effort to keep track of changes over time in the level of real resources used, net of the effect of changes in prices."(2)

Accordingly, the Education, Science and Culture Division, in close consultation with Prices Division, undertook the development of a price index for elementary-secondary education. The primary objective was to construct a statistical measure that would permit expenditures on elementary-secondary education to be deflated. Using the statistical technique of deflation, pure price change is identified first, then change in the quantity and/or the quality of education inputs can be established as residuals.

Following more than one year of consultation with potential major users, a methodology was selected. This document presents the background for the publication of price indices of elementary-secondary education and describes the detailed methodology. The following elements are discussed: the population concerned; the reference period; the items of the index and their weights; the price variations; the formula and the calculation of the index; and the teachers' salaries sub-index.

(1) ATHERTON, Dr. Peter and Dr. Henry Armstrong, A Proposal for Public School Price Indexes, prepared for Canadian School Trustees Association, November 25, 1975.

(2) Canada, Reviews of National Policies for Education, Paris. The Organization for Economic Cooperation and Development. 1976, p. 105.

The indices and sub-indices are published annually at both national and provincial levels. The sub-indices which correspond to the major educational expenditures include salaries and wages, instructional supplies, school facilities supplies and services and fees and contractual services.

Statistics Canada is pleased to acknowledge the assistance, advice and co-operation given by the various associations and individuals during the development of this index.

METHODOLOGY

2. Methodology

2.1 Population

The population used for the index covers all school boards in the ten (10) provinces of Canada.

The spending patterns of this population are used to determine in each province the relative importance of the goods and services included in the basket.

2.2 Time and Weight Reference Periods

Two reference periods are needed to construct any index which measures price changes over time. One is the time base period for which the index equals 100. The other is the period to which the weight data pertain.

The year 1973 is used for both time and weight reference periods in the price index for elementary-secondary education. On the one hand, the 1973 calendar year was an obvious choice as weight base, since it coincides with the implementation of the detailed Canadian School Board Financial Information System. The information derived from this system is essential to the accurate selection of the items to be included in the index and the weights to be assigned to each. On the other hand, the choice of 1973 as a base period also reflects budgetary considerations since using a previous year would have necessitated pricing of all items included in the basket, particularly the wages of teachers for additional years.

For comparison purposes, other statistical series can easily be converted arithmetically to a 1973 base.

2.3 Items Included in the Index

Items to be included in a price index must satisfy two main criteria. First, the commodity or service in question must have a specific price; and secondly the price must be related to a sufficiently large quantity of this commodity or service.

The development in 1973 of a standard School Board Financial Information System by the Education, Science and Culture Division permitted the selection of a set of items satisfying the above-mentioned criteria. A copy of this document is presented in Appendix I. It provides a detailed breakdown of total school board expenditures for a province by function and economic classification.

The items included in the index are the same for all provinces. They are goods and services on which the school boards spend sufficiently large sums of money to satisfy the relevancy criterion and for which price change data are available.

The items selected for inclusion in the index are presented in Appendix II. This selection was arrived at following numerous meetings between the Education, Science and Culture Division, the Prices Division and several school boards.

It should be noted that capital expenditures from current funds as well as debt charges are excluded from the basket of goods and services because the capital represents a small portion of school board expenditures, while computation of a price index for debt charges comprised of various interest rates and maturity dates are difficult and costly to measure.

2.4 Index Item Weights

Each item included in the index is assigned a weight which reflects its relative importance in the expenditure basket. This weight determines the influence of a change in the price of the item on the movement of the total index.

The weights assigned to the various goods and services were calculated on the basis of the sums reportedly spent on or committed to each item or group of items by the school boards of each province during the 1973 calendar year, as revealed by the standard Financial Information System.

Since it is neither possible nor necessary to determine the prices of all goods and services purchased by the school boards, items priced for inclusion in the index are selected so as to constitute a representative sample of all school board purchases.

The items not priced are still represented in the index by the imputation of their weights to the items that are priced. Consequently, the change in the price of an item or group of items is used to represent the price movements of similar or related items. This method is used in the construction of price indexes in Canada and in other countries (see Appendix III).

The goods and services purchased by the school boards are first classified by type of expenditure, such as Salaries and Wages, Instructional Supplies, School Facilities, Supplies and Services, and Fees and Contractual Services. These groups are then subdivided. For example, Fees and Contractual Services is broken down into two contractual subgroups: School Bus Services and Insurance. One of the latter, insurance, is in turn subdivided into two smaller groups: Buildings and Equipment.

The index item weights in effect in each province during the year 1973 are shown in Appendix II.

The following table shows the relevancy of the weighting pattern used in the calculation of the index. Even if the item weight is determined from 1973 school board expenditures, spending patterns for each item or group of items compare quite well with a more recent year.

WEIGHTS VARIATION

TOTAL CANADA

ITEMS	WEIGHT			
	1973		1976	
	%		%	
SALARIES AND WAGES	83.1		84.0	
Teachers' salaries	74.0		74.9	
Caretakers' salaries	9.1		9.1	
INSTRUCTIONAL SUPPLIES	5.4		4.9	
Scribblers and notebooks	2.8		2.6	
Pads and tablets Pens and pencils Binders, looseleaf or other	2.6(1)		2.3(1)	
SCHOOL FACILITIES, SUPPLIES AND SERVICES	4.7		4.7	
Fuel, oil, gas	1.5		1.5	
Electricity	1.4		1.4	
Supplies	1.4		1.4	
Maintenance	0.4		0.4	
FEES AND CONTRACTUAL SERVICES	6.8		6.4	
School Bus contracts	5.0		4.8	
Insurance	1.8		1.6	
Buildings		0.9		0.8
Equipment		0.9		0.8
ALL ITEMS	100.0		100.0	
% OF EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES	89.0		89.3	

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders, looseleaf or other".

2.5 Prices Used in the Price Index and Their Sources

All data on price changes are supplied by the Prices Division, except those pertaining to changes in teachers' salaries, which were compiled by the Education, Science and Culture Division and are analysed separately in Section 2.8 of this report. The sources of the price changes are also indicated in Appendix II.

All the indexes relating to supplies and services are components of either the Industry Selling Price Index or the Consumer Price Index. The school bus index is based on the CPI local transit component of the Consumer Price Index.

The data on caretakers' salaries were provided by the Pay Research Bureau of the Public Service Staff Relations Board. Basic wage rate data for the Janitor IV (public building) occupational class were judged to be the best proxy for the salary movement of school maintenance staff.

In view of the fact that a price index for elementary-secondary education has first been constructed at the provincial level, provincial price variations have been used wherever available. Otherwise, national indexes have been used. However, this does not imply that the weighting factors are national; they remain provincial, as explained previously.

2.6 Index Formula

The basic formula used for the calculation of the price index for elementary-secondary education is the Laspeyres formula:

$$I_n = \frac{\Sigma\, p_n\, q_o}{\Sigma\, p_o\, q_o} \times 100$$

where, p_n = the price of each item during period n;

p_o = the price of each item in the base period o;

q_o = the quantity of each item in the base period o.

This formula has certain advantages in addition to its compatibility with that used by Statistics Canada to construct other price indexes.

However, it would be more advantageous to use a derivative of the Laspeyres formula, which produces identical results, in calculating the price index for elementary-secondary education. This formula is defined as follows:

$$I_n = \Sigma \left(\frac{p_n}{p_o} \times 100\right) \quad \left(\frac{p_o\, q_o}{\Sigma\, p_o\, q_o} \times 100\right) \quad /100$$

This Laspeyres formula, expressed in a somewhat different form, permits the use of dollar values rather than quantities as item weights. In this case, price indexes of items are needed rather than prices; the price index for each item is thus simply the price of the item over a given period (n) as a percentage of its price over the price reference period (o). This formulation of the index permits price movements to be explicitly expressed at the item level as opposed to the summary group level only. In this form, the movement of indexes for item groups and the total index can be observed and interpreted as weighted averages of the price movements of each of the items composing the groups.

2.7 Calculation of the Index

The calculation of the index is simplified by the fact that it is constructed only once a year and that the teachers' salaries sub-index is the only one requiring specific calculations. The first stage therefore consists of calculating the provincial index. The changes in price of items included in the basket are weighted according to the relative importance of the amounts spent on each item in each province.

The provincial index is thus defined as follows:

$$I_n^P = \sum_{x=1}^{j} \left(\frac{p_{n,x}}{p_{o,x}} \times 100\right) \quad \left(\frac{p_{o,x}\, q_{o,x}}{\sum_{x=1}^{j} p_{o,x}\, q_{o,x}} \times 100\right) \quad /100$$

where

I_n^P is the provincial index for period n;

$\frac{p_{n,x}}{p_{o,x}}$ is the price of the xth index item during period n as a percentage of its price during reference period o;

$\frac{p_{o,x}\, q_{o,x}}{\sum_{x=1}^{j} p_{o,x}\, q_{o,x}}$ is the relative importance of the sums committed by the school boards of the province to the xth item during reference period o;

j is the number of items in the index.

When all the provincial indexes are constructed for a given year, the national index for the same year is obtained by weighting each provincial index according to the relative importance of total school board expenditures in each province.

The national index will be written:

$$I_n^N = \sum_{y=1}^{r} (I_{n,y}^P) \left(\frac{W_{o,y}}{\sum W_{o,y}} \times 100\right)/100$$

where

I_n^N is the national index for period n;

$I_{n,y}^P$ is the index of the yth province for period n;

$\frac{W_{o,y}}{\sum W_{o,y}}$ is the relative importance of school board expenditures in the yth province during reference period o.

2.8 Teachers' Salaries Sub-Index

Although the calculation of the teachers' salaries sub-index serves only to determine the national and provincial variations in the price of this item, as is the case with all other item price changes obtained directly from the Prices Division, this subject is treated separately here in order to highlight the complexity of the calculations involved.

Teachers' salaries account for an average of approximately 60% of total school board expenditures in Canada and therefore constitute the most important item. When capital expenditures from current funds and expenses related to debt charges are excluded from operating expenditures, this proportion becomes 75%.

The method used by the Education, Science and Culture Division to calculate this sub-index is similar to that used by the Prices Division to construct other price indexes. The experience and qualifications variables are taken into account in the calculation of the teachers' salaries sub-index so that a price index is obtained as opposed to a cost index. The method under which the average teachers' salary would have been used to measure the changes in the price of this item was rejected because the resulting measure would have reflected not only changes in price but also changes in costs stemming from the changing mix over time in qualifications and experience within the teaching force.

As in the calculation of the total price index, the calculation of the teachers' salaries sub-index requires the identification of the target group, reference periods, item weights, prices and their sources, the formula and the method used to calculate the index.

2.8.1 Target Group

The population used for the calculation of the teachers' salaries sub-index includes the full-time teaching staff only.

When larger target groups were used, tests revealed that the effect on the teachers' salaries sub-index was almost negligible. Other populations including either part-time teaching staff, teaching staff for special classes or administrative staff have been tested. The variations of the index, whether including one or several of these populations, have always been smaller than 1%.

2.8.2 Reference Periods

Since it is preferable to use the same reference periods for the teachers' salaries sub-index as for the total index, the former also uses the year 1973 as a weight base period and as a base period for which the index equals 100.

2.8.3 Items Included in the Sub-Index

Price changes in the teachers' salaries sub-index are determined on the basis of changes in the salaries of teachers possessing equal qualifications and experience in order to exclude price variations stemming from changes in these variables.

Consequently, each wage rate established by the wage scale negotiated at the board or provincial level represents an item to be included in the sub-index.

The 1972-73 wage scale of the teaching force of the school board of London and Middlesex (RC) in the province of Ontario is shown below as an example.

Categories

Years Experience	D	C	B	A1	A2	A3	A4
0	5300	5700	6200	7100	7400	8300	8800
1	5800	6200	6600	7400	7700	8600	9100
2	6200	6700	7200	8000	8200	9300	9800
3	6600	7100	7700	8500	8700	9800	10300
4	7000	7500	8100	8900	9200	10300	10700
5	7500	7900	8500	9600	9900	10900	11400
6		8300	8900	10000	10300	11300	11800
7		8700	9300	10400	10700	11700	12200
8		9100	9700	10900	11200	12200	12700
9			10100	11300	11600	12600	13200
10			10500	11700	12000	13100	13700
11			10900	12400	12500	13600	14200
12					13100	14200	14700
13						15000	15200
14							16000

The items included in the sub-index are identified and measured either at the board level, in provinces where salary negotiations are conducted locally (Ontario, Manitoba, Alberta and British Columbia), or at the provincial level, where standard wage rates are negotiated for all teachers in the province.

2.8.4 Sub-Index Item Weights and their Sources

The influence of the change in price of each item on the movement of the sub-index is determined by the total wages paid to full-time teachers under each item. Total wages are simply the number of registered full-time teachers in each experience-qualifications category multiplied by the corresponding wage rate. For example, the 1972-73 experience-qualifications distribution of full-time teachers in the school board of London and Middlesex in Ontario was as follows:

Categories

Years Experience	D	B	C	A1	A2	A3	A4
0	5	5	1	9	1		
1	21	1		13	3		1
2	26	6		7	7		
3	19	14	4	1	3		
4	21	14	5	1	2	1	1
5	9	18	11	2	6		
6	8	14	7	4	6		
7	6	10	7	3	6		
8	4	4		3	7		
9	3	5	1	2	4	1	
10	2	3	3	1	2	1	
11		5		1	4	1	1
12	6	5		2	3		1
13	1	1	2	1	4	1	
14		1	2	1	5	1	
15-19	2	7	8	2	3	2	2
20-24	6	4	4	2	8	1	1

As mentioned previously, the weights used to determine the influence of each item are time invariant and correspond to those used in 1973. However, since the experience-qualifications distribution of full-time teachers changes over time, it became necessary to first measure the importance of this distribution and then its effect on the total sub-index.

2.8.5 Prices used in Calculating the Sub-Index and their Sources

The prices of items included in the sub-index are simply the wage rates in effect in each school board or in each province, as the case may be. These rates are negotiated in collective agreements ratified by both parties and correspond to the actual wages paid by the employers.

All wage scales have been converted to the calendar year in order to standardize the duration of labour contracts to the national level. An example is given below:

London and Middlesex (RC), Calendar Year 1973

Years Experience	D	B	C	A1	A2	A3	A4
0	5366	5767	6333	7166	7466	8366	8867
1	5867	6267	6767	7533	7833	8733	9233
2	6266	7166	7300	8066	8300	9367	9867
3	6700	7600	7800	8567	8800	9867	10367
4	7134	8000	8233	9000	9300	10367	10800
5	7633	8433	8634	9633	9933	10934	11433
6		8833	9066	10067	10367	11400	11867
7		9234	9500	10500	10800	11833	12300
8			9900	11000	11300	12333	12800
9			10300	11433	11733	12733	13300
10			10700	11867	12167	13300	13833
11			11134	12500	12666	13800	14367
12					13233	14400	14900
13						15133	15433
14							16167

This scale has been determined by taking two-thirds of each wage rate from the scale negotiated for September 1972 to August 1973 and one-third of the wage rate from the scale in effect between September 1973 and December 1973.

Since the changes in the prices of the items (wage rates) are determined on the basis of wage scales, the latter are sampled from those provinces in which wages are negotiated at the board level. The teachers' salaries sub-index is therefore calculated on the basis of 16 school boards in Ontario, 14 in Manitoba, 16 in Alberta and 14 in British Columbia.(1)

As for the wage scales per se, they are derived from different sources (Teachers' Associations, school boards, departments of education, etc.).

2.8.6 Sub-Index Formula

As for the total index in Section 2.6, the basic formula used in calculating the teachers' salaries sub-index is the Laspeyres:

$$T_n = \frac{\sum_{x=1}^{h} \sum_{y=1}^{g} \bar{S}_{n,x,y} \cdot N_{o,x,y}}{\sum_{x=1}^{h} \sum_{y=1}^{g} \bar{S}_{o,x,y} \cdot N_{o,x,y}}$$

(1) The sampling methodology is available upon request.

where

T_n is the teachers' salaries sub-index for period n;

$\bar{S}_{n,x,y}$ is the wage rate during period n of teachers with x years of experience and y qualifications;

$\bar{S}_{o,x,y}$ is the wage rate during base period o of teachers with x years of experience and y qualifications;

$N_{o,x,y}$ is the number of teachers during base period o with x years of experience and y qualifications;

h is the number of years experience;

g is the number of years of education.

The sub-index can be directly calculated from the above formula. However, it is preferable to express the formula in the following form:

$$T_n = \sum_{x=1}^{h} \sum_{y=1}^{g} \left(\frac{\bar{S}_{n,x,y}}{\bar{S}_{o,x,y}} \times 100\right) \left(\frac{\bar{S}_{o,x,y} \cdot N_{o,x,y}}{\sum_{x=1}^{h} \sum_{y=1}^{g} \bar{S}_{o,x,y} \cdot N_{o,x,y}}\right) / 100$$

The two formulae give identical results. However, the second formula is superior when the items are weighted according to their dollar value as opposed to their quantity.

Expressed in this form, the movement of the sub-index can be observed and interpreted as a weighted average of the price movements of each item.

2.8.7 Calculation of the Sub-Index

The calculation procedure differs according to the manner in which the collective agreements are negotiated. In provinces where salary negotiations are conducted at the provincial level, there is no need to first calculate a separate index for each school board, since identical results will be obtained using the data for the whole province. The calculations are therefore performed as follows:

$$T_n^P = \sum_{x=1}^{h} \sum_{y=1}^{g} \left(\frac{\bar{S}_{n,x,y}}{\bar{S}_{o,x,y}} \times 100 \right) \left(\frac{\bar{S}_{o,x,y} \cdot N_{o,x,y}}{\sum_{x=1}^{h} \sum_{y=1}^{g} \bar{S}_{o,x,y} \cdot N_{o,x,y}} \right) / 100$$

where

T_n^P is the teachers' salaries sub-index for period n in province P;

$\bar{S}_{n,x,y}$ is the wage rate during period n of teachers with x years of experience and y qualifications;

$\bar{S}_{o,x,y}$ is the wage rate during base period o of teachers with x years of experience and y qualifications;

$N_{o,x,y}$ is the number of teachers during base period o with x years of experience and y qualifications.

However, far different calculations must be performed for those provinces in which salary negotiations are conducted at the local level. As mentioned previously, a sample of school boards was taken from each of these provinces, after which these samples were then broken down into two distinct groups: metropolitan area school boards and rural area school boards.

The teachers' salaries sub-index was thus calculated for each school board in the sample, as follows:

$$T_n^B = \sum_{x=1}^{h} \sum_{y=1}^{g} \left(\frac{\bar{S}_{n,x,y}}{\bar{S}_{o,x,y}} \times 100 \right) \left(\frac{\bar{S}_{o,x,y} \cdot N_{o,x,y}}{\sum_{x=1}^{h} \sum_{y=1}^{g} \bar{S}_{o,x,y} \cdot N_{o,x,y}} \right) / 100$$

where

T_n^B is the teachers' salaries sub-index for school board B during period n.

$\bar{S}_{n,x,y}$ is the wage rate during period n of teachers with x years of experience and y qualifications.

$\bar{S}_{o,x,y}$ is the wage rate during base period o of teachers with x years of experience and y qualifications.

$N_{o,x,y}$ is the number of teachers during base period o with x years of experience and y qualifications.

In each of these provinces, the salaries sub-indexes for the teachers in each school board are then aggregated in accordance with the prescribed stratification.

For example, the metropolitan area teachers' salaries sub-index for a given province is calculated by weighting each of the sub-indexes of the school boards included in this group according to the relative importance of the total wages of each school board within the group.

Thus,

$$T_n^G = \sum_{j=1}^{r} (T_{n,j}^B) \left(\frac{S_{o,j}}{\sum_{j=1}^{r} S_{o,j}} \times 100 \right) /100$$

where

T_n^G is the teachers' salaries sub-index for each group during period n;

$T_{n,j}^B$ is the salaries sub-index for teachers in the jth school board during period n;

$S_{o,j}$ is the total teachers' salaries of the jth school board during base period o;

r is the number of school boards in the group.

The next step therefore consists of aggregating the sub-index of each group in each province. To calculate the provincial teachers' salaries sub-index, the sub-index of each group is weighted according to the relative importance of the total wages of all school boards, metropolitan or rural. The provincial sub-index is therefore defined as follows:

$$T_n^P = \sum_{j=1}^{r} (T_{n,j}^G) \left(\frac{S_{o,j}^T}{\sum_{j=1}^{r} S_{o,j}^T} \times 100 \right) /100$$

where

T_n^P is the provincial teachers' salaries sub-index for period n;

$T_{n,j}^G$ is the metropolitan (j_1) or rural (j_2) school board teachers' salaries sub-index for period n;

$S_{o,j}^T$ is the total salaries of teachers from all metropolitan (j_1) or rural (j_2) school boards during base year o;

r is the number of school board groups.

The national teachers' salaries sub-index remains to be calculated. It is obtained by weighting each provincial sub-index according to the relative importance of total teachers' salaries in each province:

$$T_n^N = \sum_{j=1}^{r} (T_n^P) \left(\frac{S_{o,j}}{\sum_{j=1}^{r} S_{o,j}} \times 100\right) \quad /100$$

where

T_n^N is the national teachers' salaries sub-index for period n;

T_n^P is the provincial teachers' salaries sub-index for period n;

$S_{o,j}$ is the total teachers' salaries in the jth province during base year o;

r is the number of provinces.

3. Conclusion

The availability of price indexes for elementary-secondary education is assuredly the addition of a new tool for education administrators in Canada. However, the utilisation and the interpretation of these price indexes should be done with caution.

The provincial indexes cannot be used as measures of price level from one province to another. They indicate the relative price variation over time in each province rather than price level.

All changes in prices for items included in the basket of goods and services are assumed to be the same for every province except for the change in price for teachers' salaries which is calculated for each province. As mentioned previously, price variations (except teachers' salaries) come from Prices Division and are not available by province. For example, the price variation for "School Bus Services" used in the calculation of provincial indexes is the same for all provinces.

It is necessary to remember that capital expenditures and expenses related to debt servicing are intentionally excluded from the indexes mainly because it is very difficult to observe their prices. (see Section 2.3 of this report).

The education price index at the elementary-secondary level only measures the price change of a fixed quantity of goods and services bought by school boards in Canada. More specifically, it measures the variation rate over the years for the price of a fixed "basket" of goods and services which represent 1973 school board expenditures. The "basket" is composed of goods and services which remain constant or equivalent (in quantity and quality). It includes only the goods and services which have a price and for which the prices can be observed continuously. It is a price index whose movements are attributable only to price variations and not to quality variations. It is also related to the school boards as a whole (sample in 4 provinces) and therefore does not necessarily reflect the price evolution of a particular school board.

Amongst the inconveniences stemming from inflation, there is the difficulty for administrators to evaluate the real progression of expenditures. With the use of a price index, school board financial statements can be compared from year to year since dollars have the same value when deflated.

When price variations attributable to inflation are excluded, the administrator must use other tools to continued his analysis. For example, if teachers' salaries for a school board or a province show a real variation of x% after being deflated according to the price index for elementary-secondary education, it might be explained by the variation in the number of teachers and/or the variation of qualifications and experience of teachers. Although there are certain limitations to its use, the construction of such an index has filled a need widely recognized by educational policy makers.

Suggestions concerning the content of this report and the publication of indexes, or inquiries for additional information should be addressed to Education, Science and Culture Division, Statistics Canada, Ottawa.

APPENDIX I

EXPENDITURE BY FUNCTION AND ECONOMIC CLASSIFICATION
DÉPENSES PAR RUBRIQUE ET CLASSIFICATION ÉCONOMIQUE

Function / *Rubrique* — Economic Classification / *Classification économique*		Salaries and wages — *Traitements et salaires*	Fringe benefits — *Avantages sociaux*	Travel expenses — *Frais de voyage*	Personnel training — *Formation du personnel*	Supplies and services — *Fournitures et services*	Fees and contractual services — *Honoraires et services contractuels*	Other operating expenditure — *Autres dépenses d'exploitation*	Transfers to — *Transferts à*	Capital expenditures — *Dépenses en immobilisations*	Total
	Code	0010	0020	0030	0040	0050	0060	0070	0080	0090	0095
Business Administration – *Administration générale*	10										
Computer – *Informatique*	20										
Instruction – Éducation: Instructional Administration – *Administration pédagogique*	32										
Instruction – Éducation: Day School Regular – *Cours régulier du jour*	34										
Instruction – Éducation: Day School Special – *Cours spéciaux de jour*	36										
Instruction – Éducation: Special Courses – *Enseignements spéciaux*	38										
Instruction – Éducation: Adult Education – *Éducation permanente*	39										
Educational services – Services éducatifs: Audio-Visual – *Audio-visuel*	42										
Educational services – Services éducatifs: Guidance and Counselling – *Orientation*	44										
Educational services – Services éducatifs: Library – *Bibliothèque*	46										
Educational services – Services éducatifs: Psychological – *Psychologie*	48										
Educational services – Services éducatifs: Other – *Autres*	49										
Attendance – *Fréquentation scolaire*	52										
Health – *Services de santé*	54										
Food Services – *Services alimentaires*	56										
School Facilities Services – *Services de l'équipement scolaire*	60										
Transportation – *Transport*	70										
Other Operating Expenses – *Autres dépenses d'exploitation*	80										
Capital Expenditures (non-allocable) – *Dépenses en immobilisations (non-réparties)*	90										
Debt Charges – *Service de la dette*	95										
Total	98										

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APPENDIX II

Newfoundland

1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	81.5		
Teachers' salaries		77.1	Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries		4.4	Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	2.5		
Scribblers, notebooks		1.3	ISPI Scribblers, notebooks and exer. books - National
Pads and tablets		1.2(1)	ISPI Pads, tablets, writing - National
Pens and pencils			ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	5.9		
Fuel, oil, gas		1.9	ISPI Fuel, oil Nos 2 and 3 - National
Electricity		1.7	Electricity Index (commercial - Ind. Prices) - National
Supplies		1.7	CPI Household supplies - National
Maintenance		0.6	CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	10.1		
School bus contracts		7.9	CPI Local Transit - National
Insurance		2.2	
Building		1.1	CPI Dwelling Insurance - National
Equipment		1.1	CPI Contents Insurance - National
ALL ITEMS		100.0%	
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES		79.1%	

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders looseleaf or other".

Prince Edward Island 1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	87.3		
Teachers' salaries		79.3	Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries		8.0	Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	2.7		
Scribblers, notebooks		1.4	ISPI Scribblers, notebooks and exer. books - National
Pads and tablets			ISPI Pads, tablets, writing - National
Pens and pencils		1.3(1)	ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	6.1		
Fuel, oil, gas		1.9	ISPI Fuel, oil Nos 2 and 3 - National
Electricity		1.8	Electricity Index (commercial - Ind. Prices) - National
Supplies		1.8	CPI Household supplies - National
Maintenance		0.6	CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	3.9		
School bus contracts		3.3	CPI Local Transit - National
Insurance		0.6	
Building		0.3	CPI Dwelling Insurance - National
Equipment		0.3	CPI Contents Insurance - National
ALL ITEMS		100.0%	
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES		81.1%	

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders looseleaf or other".

Nova Scotia

1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	88.3		
Teachers' salaries		79.3	Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries		9.0	Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	2.5		
Scribblers, notebooks		1.3	ISPI Scribblers, notebooks and exer. books - National
Pads and tablets		1.2(1)	ISPI Pads, tablets, writing - National
Pens and pencils			ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	4.7		
Fuel, oil, gas		1.5	ISPI Fuel, oil Nos 2 and 3 - National
Electricity		1.4	Electricity Index (commercial & Ind. Prices) - National
Supplies		1.4	CPI Household supplies - National
Maintenance		0.4	CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	4.5		
[illegible] bus contracts		2.9	CPI Local Transit - National
[illegible]nce		1.6	
[illegible]lding		0.8	CPI Dwelling Insurance - National
[illegible]uipment		0.8	CPI Contents Insurance - National
ALL ITEMS		100.0%	
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES		80.5%	

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders looseleaf or other".

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New Brunswick

1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	85.8		
Teachers' salaries		76.2	Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries		9.6	Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	2.7		
Scribblers, notebooks		1.4	ISPI Scribblers, notebooks and exer. books - National
Pads and tablets			ISPI Pads, tablets, writing - National
Pens and pencils		1.3(1)	ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	7.2		
Fuel, oil, gas		2.3	ISPI Fuel, oil Nos 2 and 3 - National
Electricity		2.1	Electricity Index (commercial - Ind. Prices) - National
Supplies		2.1	CPI Household supplies - National
Maintenance		0.7	CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	4.3		
School bus contracts		3.7	CPI Local Transit - National
Insurance		0.6	
Building		0.3	CPI Dwelling Insurance - National
Equipment		0.3	CPI Contents Insurance - National
ALL ITEMS		100.0%	
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES		94.8%	

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders looseleaf or other".

Quebec

1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	80.4		
Teachers' salaries		72.9	Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries		7.5	Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	5.8		
Scribblers, notebooks		3.0	ISPI Scribblers, notebooks and exer. books - National
Pads and tablets		2.8(1)	ISPI Pads, tablets, writing - National
Pens and pencils			ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	2.8		
Fuel, oil, gas		0.9	ISPI Fuel, oil Nos 2 and 3 - National
Electricity		0.8	Electricity Index (commercial - Ind. Prices) - National
Supplies		0.8	CPI Household supplies - National
Maintenance		0.3	CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	11.0		
School bus contracts		7.4	CPI Local Transit - National
Insurance		3.6	
Building		1.8	CPI Dwelling Insurance - National
Equipment		1.8	CPI Contents Insurance - National
ALL ITEMS		100.0%	
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES		74.3%	

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders looseleaf or other".

Ontario

1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	83.5		
Teachers' salaries		73.6	Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries		9.9	Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	6.0		
Scribblers, notebooks		3.1	ISPI Scribblers, notebooks and exer. books - National
Pads and tablets		2.9(1)	ISPI Pads, tablets, writing - National
Pens and pencils			ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	5.2		
Fuel, oil, gas		1.7	ISPI Fuel, oil Nos 2 and 3 - National
Electricity		1.5	Electricity Index (commercial - Ind. Prices) - National
Supplies		1.5	CPI Household supplies - National
Maintenance		0.5	CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	5.3		
School bus contracts		4.3	CPI Local Transit - National
Insurance		1.0	
Building		0.5	CPI Dwelling Insurance - National
Equipment		0.5	CPI Contents Insurance - National
ALL ITEMS		100.0%	
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES		79.0%	

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders looseleaf or other".

Manitoba

1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	84.2		
Teachers' salaries		73.8	Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries		10.4	Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	7.1		
Scribblers, notebooks		3.7	ISPI Scribblers, notebooks and exer. books - National
Pads and tablets		3.4(1)	ISPI Pads, tablets, writing - National
Pens and pencils			ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	4.7		
Fuel, oil, gas		1.5	ISPI Fuel, oil Nos 2 and 3 - National
Electricity		1.4	Electricity Index (commercial - Ind. Prices) - National
Supplies		1.4	CPI Household supplies - National
Maintenance		0.4	CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	4.0		
School bus contracts		3.6	CPI Local Transit - National
Insurance		0.4	
Building		0.2	CPI Dwelling Insurance - National
Equipment		0.2	CPI Contents Insurance - National
ALL ITEMS		100.0%	
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES		76.8%	

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders looseleaf or other".

Saskatchewan

1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	78.9		
Teachers' salaries		71.2	Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries		7.7	Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	6.3		
Scribblers, notebooks		3.3	ISPI Scribblers, notebooks and exer. books - National
Pads and tablets		3.0(1)	ISPI Pads, tablets, writing - National
Pens and pencils			ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	5.4		
Fuel, oil, gas		1.7	ISPI Fuel, oil Nos 2 and 3 - National
Electricity		1.6	Electricity Index (commercial - Ind. Prices) - National
Supplies		1.6	CPI Household supplies - National
Maintenance		0.5	CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	9.4		
School bus contracts		8.0	CPI Local Transit - National
Insurance		1.4	
Building		0.7	CPI Dwelling Insurance - National
Equipment		0.7	CPI Contents Insurance - National
ALL ITEMS		100.0%	
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES		85.6%	

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders looseleaf or other".

Alberta

1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	84.1		
Teachers' salaries	74.7		Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries	9.4		Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	4.8		
Scribblers, notebooks	2.5		ISPI Scribblers, notebooks and exer. books - National
Pads and tablets	2.3(1)		ISPI Pads, tablets, writing - National
Pens and pencils			ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	5.1		
Fuel, oil, gas	1.6		ISPI Fuel, oil Nos 2 and 3 - National
Electricity	1.5		Electricity Index (commercial - Ind. Prices) - National
Supplies	1.5		CPI Household supplies - National
Maintenance	0.5		CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	6.0		
School bus contracts	4.8		CPI Local Transit - National
Insurance	1.2		
Building		0.6	CPI Dwelling Insurance - National
Equipment		0.6	CPI Contents Insurance - National
ALL ITEMS	100.0%		
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES	80.2%		

(1) The weight distribution of these sub-items is aggregated to keep confidential the price data of "Binders looseleaf or other".

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British Columbia

1973 WEIGHTING DIAGRAM OF THE EDUCATION PRICE INDEX,

ELEMENTARY SECONDARY LEVEL

ITEMS	WEIGHTS %		SOURCE AND LEVEL OF PRICE DATA
SALARIES and WAGES	87.3		
Teachers' salaries		76.5	Teachers Salaries Index (Education, Science and Culture Division) - Provincial
Caretakers' salaries		10.8	Pay Research Bureau, Janitor IV (Public Bldg) - National
INSTRUCTIONAL SUPPLIES	4.0		
Scribblers, notebooks		2.1	ISPI Scribblers, notebooks and exer. books - National
Pads and tablets		1.9(1)	ISPI Pads, tablets, writing - National
Pens and pencils			ISPI Pen and pencil manufacturers - National
Binders, looseleaf or other			ISPI Binders, looseleaf or other - National
SCHOOL FACILITIES, SUPPLIES and SERVICES	6.1		
Fuel, oil, gas		1.9	ISPI Fuel, oil Nos 2 and 3 - National
Electricity		1.8	Electricity Index (commercial - Ind. Prices) - National
Supplies		1.8	CPI Household supplies - National
Maintenance		0.6	CPI Homeowners repairs - National
FEES and CONTRACTUAL SERVICES	2.6		
School bus contracts		1.4	CPI Local Transit - National
Insurance		1.2	
Building		0.6	CPI Dwelling Insurance - National
Equipment		0.6	CPI Contents Insurance - National
ALL ITEMS		100.0%	
% OF THE EXPENSES OF THE ITEMS RETAINED, IN RELATION TO THE TOTAL EXPENSES		82.5%	

(1) The weight distribution of these sub-tiems is aggregated to keep confidential the price data of "Binders looseleaf or other".

APPENDIX III

EXPENDITURE BY FUNCTION AND ECONOMIC CLASSIFICATION
DÉPENSES PAR RUBRIQUE ET CLASSIFICATION ÉCONOMIQUE

Function – *Rubrique* / Economic Classification – *Classification économique*		Salaries and wages – *Traitements et salaires*	Fringe benefits – *Avantages sociaux*	Travel expenses – *Frais de voyage*	Personnel training – *Formation du personnel*	Supplies and services – *Fournitures et services*	Fees and contractual services – *Honoraires et services contractuels*	Other operating expenditure – *Autres dépenses d'exploitation*	Transfers to – *Transferts à*	Capital expenditures – *Dépenses en immobilisations*	Total
	Code	0010	0020	0030	0040	0050	0060	9070	0080	0090	0095
Business Administration – *Administration générale*	10					Instructional supplies					
Computer – *Informatique*	20										
Instruction – *Éducation*: Instructional Administration – *Administration pédagogique*	32										
Day School Regular – *Cours régulier du jour*	34	Teachers salaries									
Day School Special – *Cours spéciaux du jour*	36										
Special Courses – *Enseignements spéciaux*	38										
Adult Education – *Éducation permanente*	39										
Educational services – *Services éducatifs*: Audio-Visual – *Audio-visuel*	42										
Guidance and Counselling – *Orientation*	44										
Library – *Bibliothèque*	46										
Psychological – *Psychologie*	48										
Other – *Autres*	49										
Attendance – *Fréquentation scolaire*	52										
Health – *Services de santé*	54										
Food Services – *Services alimentaires*	56	Caretakers salaries				School facilities supplies and services					
School Facilities Services – *Services de l'équipement scolaire*	60						Insurance				
Transportation – *Transport*	70					School bus contracts					
Other Operating Expenses – *Autres dépenses d'exploitation*	80										
Capital Expenditures (non-allocable) – *Dépenses en immobilisations (non-réparties)*	90										
Debt Charges – *Service de la dette*	95										
Total	98										

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DEFINITION OF THE WEIGHTING

ITEMS

TEACHERS SALARIES

Salaries and fringe benefits of instructional administration officials, teachers, and other instructional personnel for day school regular and special courses.

CARETAKERS SALARIES

Salaries and fringe benefits of the supervisory and administrative personnel, personnel related directly to the preparation of food, building maintenance, transportation of pupils, and expenses of other activities related to education.

INSTRUCTIONAL SUPPLIES

Expenditures for supplies and services such as office supplies, instructional supplies, library supplies, and rental of furniture and equipment.

SCHOOL FACILITIES SUPPLIES and SERVICES

Expenditures for supplies and services related to the operation of all buildings and properties.

SCHOOL BUS CONTRACTS

In addition to school bus contracts, this item includes expenses related to school buses when this service is directly under the board.

INSURANCE

Premiums for insurance related to building and contents, and vehicles owned by the board.

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Service Bulletin Bulletin de service

Vol. 1, No. 1

EDUCATION PRICE INDEX ELEMENTARY-SECONDARY LEVEL

INTRODUCTION

Based on estimates, expenditures on elementary-secondary education totalled more than $12 billion in 1978-79. This represents an increase of approximately 95% over 1973-74 in spite of a constant decrease in enrolment. In order to permit a more complete analysis of this occurrence, several organizations have recommended the construction of an education price index. Notable among these are the Canadian School Trustees Association (CSTA) and the OECD in its report published in 1976 on Education in Canada.

In response to these recommendations, the Education, Science and Culture Division, in close consultation with Prices Division, undertook the construction of an education price index at the elementary-secondary level. The new index is published in this Service Bulletin. The data are available by province for the years 1973 to 1978.

This education price index at the elementary-secondary level measures solely the changes in price of a fixed quantity of goods and services purchased by school boards in Canada. This index then permits comparison of school board financial statements for various years in constant dollars. Thus, since changes in price are eliminated by using the technique of deflation, an analysis of real changes in expenditures can

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INDICE DES PRIX DE L'ENSEIGNEMENT NIVEAUX ÉLÉMENTAIRE ET SECONDAIRE

INTRODUCTION

Selon des estimations, les dépenses aux fins de l'enseignement élémentaire et secondaire ont totalisé plus de $12 milliards en 1978-79, soit une augmentation d'environ 95 % par rapport à 1973-74 et ce, en dépit d'une diminution constante de la clientèle scolaire. Afin de permettre une meilleure analyse de ce phénomène, plusieurs organisations ont recommandé la construction d'un indice des prix de l'enseignement. Parmi celles-ci, mentionnons l'Association canadienne des commissaires d'écoles (ACCE) et l'OCDÉ dans son rapport, publié en 1976, sur les politiques d'éducation.

Suite à ces recommendations, la Division de l'éducation, des sciences et de la culture, en étroite collaboration avec la Division des prix, a entrepris la construction d'un indice des prix de l'enseignement aux niveaux élémentaire et secondaire. Les données concernant ce nouvel indice sont publiées dans le présent Bulletin de service et sont disponibles par province pour les années 1973 à 1978.

Cet indice des prix de l'enseignement aux niveaux élémentaire et secondaire mesure uniquement les changements de prix d'une quantité fixe de biens et services achetés par les conseils scolaires au Canada. L'utilisation de cet indice permet donc la comparaison en dollars constants des états financiers des conseils scolaires pour des années différentes. Ainsi, lorsques les variations de prix sont exclues par le biais de la technique de dégonflage, l'analyse des variations

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be made. This analysis should take into account variations in numbers of teachers, their education and experience, as well as the quality and/or the quantity of the other goods and services purchased and all other relevant factors.

A detailed analysis of school board expenditures deflated by means of the new education price index at the elementary-secondary level will appear soon in a future Service Bulletin.

Construction of the Index

The methodology decided upon to calculate the index was the subject of wide consultation with the eventual users. The education price index at the elementary-secondary level is base-weighted, that is, the total price movement is a weighted average of individual components, where weights reflect the relative importance of expenditures in the base period, 1973. The weighting coefficients are derived from the survey on school board financial statistics.

The index is composed from 13 items which are grouped into four categories as follows: salaries and wages; instructional supplies; fees and contractual services; and school facilities, supplies and services.

All of the price data, except for teacher's salaries, is derived from components of price series already published by Statistics Canada, particularly the Consumer Price Index and the Industry Selling Price Index. The teachers' salaries sub-index was constructed from teachers' salary scales. So that the quantity and mix of teachers do not influence price movement from one year to the next, the distribution of teachers by experience and qualifications was held constant at the base year, 1973.

For those who would desire a more thorough description of the methodology, a non-catalogued publication is available upon request. For further information please contact Mr. Yves Dupuis, Education, Science and Culture Division, Statistics Canada, Ottawa, Ontario, K1A OT6 (613-995-9795).

réelles des dépenses peut se poursuivre. Cette analyse devrait prendre en considération les variations du nombre d'enseignants, de leur scolarité et de leur expérience, de la qualité et/ou de la quantité des autres biens et services achetés ou de tout autre facteur pertinent.

Une analyse détaillée des dépenses des conseils scolaires, dégonflées selon le nouvel indice des prix de l'enseignement aux niveaux élémentaire et secondaire, apparaîtra bientôt dans un prochain Bulletin de service.

Construction de l'indice

La méthodologie retenue pour fins de calcul de l'indice fut l'objet d'une vaste consultation auprès des utilisateurs éventuels. L'indice des prix de l'enseignement aux niveaux élémentaire et secondaire est un indice pondéré sur la période de base, c'est-à-dire que l'ensemble du mouvement des prix est une moyenne pondérée des différentes composantes où les poids reflètent l'importance relative des dépenses à la période de base, soit 1973. Les coefficients de pondération proviennent de l'enquête sur les statistiques financières des conseils scolaires.

Les articles composant l'indice, au nombre de 13, sont regroupés sous quatre catégories, soit traitements et salaires, matériels didactiques, honoraires et services constructuels et, installations, fournitures et services scolaires.

Les prix des articles proviennent des séries de prix déjà publiées par Statistique Canada, particulièrement de l'indice des prix à la consommation et de l'indice des prix de ventes de l'industrie, sauf pour le traitement des enseignants. Le prix de cette dernière composante est construit à partir des échelles salariales des enseignants. Afin que le nombre d'enseignants et la variation expérience-scolarité n'influencent pas le mouvement des prix d'une année à l'autre, la répartition des enseignants selon l'expérience et la scolarité est maintenue constante à l'année de base soit 1973.

Pour ceux qui désireraient une description plus approfondie de la méthodologie, une publication ne figurant pas au catalogue est disponible sur demande. Pour plus de renseignements, veuillez communiquer avec M. Yves Dupuis, Division de l'éducation, des sciences et de la culture, Statistique Canada, Ottawa Ontario, K1A OT6 (613-995-9795).

TABLE 1. Education Price Index at the Elementary-secondary Level and its Sub-indices by Province, 1973-1978

TABLEAU 1. Indice des prix de l'enseignement aux niveaux élémentaire et secondaire et ses sous-indices selon la province, 1973-1978

Province and index Province et indice	1973	1974	1975	1976	1977	1978
	1973=100					
TOTAL, CANADA:						
Education price index – Indice des prix de l'enseignement	100.0	110.4	127.0	146.4	158.4	170.2
Salaries and wages – Traitements et salaires	100.0	109.1	125.6	145.5	157.9	169.8
– Teachers' salaries – Traitements des enseignants	100.0	109.1	125.9	146.1	157.7	169.9
– Caretakers' salaries – Salaires des concierges	100.0	109.4	122.8	141.0	159.8	169.4
Instructional supplies – Matériels didactiques	100.0	133.0	153.0	160.3	160.7	170.5
Fees and contractual services – Honoraires et services contractuels	100.0	104.0	120.1	146.1	157.0	166.2
School facilities, supplies and services – Installations, fournitures et services scolaires	100.0	116.0	131.7	148.0	166.1	181.7
Newfoundland – Terre-Neuve:						
Education price index – Indice des prix de l'enseignement	100.0	107.4	129.2	155.6	169.7	185.1
Salaries and wages – Traitements et salaires	100.0	106.5	129.6	157.5	172.1	188.4
– Teachers' salaries – Traitements des enseignants	100.0	106.3	130.0	158.4	172.8	189.5
– Caretakers' salaries – Salaires des concierges	..	..	..	..	..	..
Instructional supplies – Matériels didactiques	..	..	..	..	..	..
Fees and contractual services – Honoraires et services contractuels	100.0	103.6	118.9	144.3	154.7	163.8
School facilities, supplies and services – Installations, fournitures et services scolaires	..	..	..	..	..	..
Prince Edward Island – Île-du-Prince-Édouard:						
Education price index – Indice des prix de l'enseignement	100.0	107.9	122.6	151.4	167.9	178.8
Salaries and wages – Traitements et salaires	100.0	106.9	121.3	151.8	169.0	179.7
– Teachers' salaries – Traitements des enseignants	100.0	106.6	121.1	152.9	169.9	180.7
– Caretakers' salaries – Salaires des concierges	..	..	..	..	..	..
Instructional supplies – Matériels didactiques	..	..	..	..	..	..
Fees and contractual services – Honoraires et services contractuels	100.0	102.9	117.1	141.8	151.3	160.2
School facilities, supplies and services – Installations, fournitures et services scolaires	..	..	..	..	..	..
Nova Scotia – Nouvelle-Écosse:						
Education price index – Indice des prix de l'enseignement	100.0	109.7	123.1	151.2	163.3	169.8
Salaries and wages – Traitements et salaires	100.0	109.0	121.8	151.1	163.3	169.0
– Teachers' salaries – Traitements des enseignants	100.0	108.9	121.7	152.3	163.7	169.0
– Caretakers' salaries – Salaires des concierges	..	..	..	..	..	..
Instructional supplies – Matériels didactiques	..	..	..	..	..	..
Fees and contractual services – Honoraires et services	100.0	104.9	122.8	149.9	162.1	171.6
School facilities, supplies and services – Installations, fournitures et services scolaires	..	..	..	..	..	..

.. figures not available.
.. nombres indisponibles.

TABLE 1. Education Price Index at the Elementary-secondary Level and its Sub-indices by Province, 1973-1978 - Continued

TABLEAU 1. Indice des prix de l'enseignement aux niveaux élémentaire et secondaire et ses sous-indices selon la province, 1973-1978 - suite

Province and index Province et indice	1973	1974	1975	1976	1977	1978
	1973=100					
New Brunswick - Nouveau-Brunswick:						
Education price index - Indice des prix de l'enseignement	100.0	107.6	127.4	148.7	161.4	168.9
Salaries and wages - Traitements et salaires	100.0	106.3	126.8	148.9	161.7	168.4
- Teachers' salaries - Traitements des enseignants	100.0	105.9	127.3	149.9	161.9	168.3
- Caretakers' salaries - Salaires des concierges	..	..	..	..	..	..
Instructional supplies - Matériels didactiques	..	..	..	..	..	..
Fees and contractual services - Honoraires et services contractuels	100.0	102.3	115.3	139.2	147.8	156.5
School facilities, supplies and services - Installations, fournitures et services scolaires	..	..	..	..	..	..
Québec:						
Education price index - Indice des prix de l'enseignement	100.0	113.7	131.1	147.6	159.5	174.7
Salaries and wages - Traitements et salaires	100.0	113.4	130.7	146.4	159.0	175.3
- Teachers' salaries - Traitements des enseignants	100.0	113.8	131.5	147.0	158.9	175.9
- Caretakers' salaries - Salaires des concierges	..	..	..	..	..	..
Instructional supplies - Matériels didactiques	..	..	..	..	..	..
Fees and contractual services - Honoraires et services contractuels	100.0	104.8	122.3	149.2	161.2	170.7
School facilities, supplies and services - Installations, fournitures et services scolaires	..	..	..	..	..	..
Ontario:						
Education price index - Indice des prix de l'enseignement	100.0	108.3	123.5	146.1	158.8	169.5
Salaries and wages - Traitements et salaires	100.0	106.3	121.2	145.1	158.5	169.1
- Teachers' salaries - Traitements des enseignants	100.0	105.9	121.0	145.7	158.4	169.1
- Caretakers' salaries - Salaires des concierges	..	..	..	..	..	..
Instructional supplies - Matériels didactiques	..	..	..	..	..	..
Fees and contractual services - Honoraires et services contractuels	100.0	103.2	118.0	143.0	152.9	161.9
School facilities, supplies and services - Installations, fournitures et services scolaires	..	..	..	..	..	..
Manitoba:						
Education price index - Indice des prix de l'enseignement	100.0	112.5	129.0	143.8	155.1	164.7
Salaries and wages - Traitements et salaires	100.0	111.0	127.4	142.5	154.3	163.6
- Teachers' salaries - Traitements des enseignants	100.0	111.3	128.1	142.7	153.6	162.8
- Caretakers' salaries - Salaires des concierges	..	..	..	..	..	..
Instructional supplies - Matériels didactiques	..	..	..	..	..	..
Fees and contractual services - Honoraires et services contractuels	100.0	102.2	115.0	138.7	147.2	155.9
School facilities, supplies and services - Installations, fournitures et services scolaires	..	..	..	..	..	..

.. figures not available.
.. nombres indisponibles.

TABLE 1. Education Price Index at the Elementary-secondary Level and its Sub-indices by Province, 1973-1978 - Concluded

TABLEAU 1. Indice des prix de l'enseignement aux niveaux élémentaire et secondaire et ses sous-indices selon la province, 1973-1978 - fin

Province and index Province et indice	1973	1974	1975	1976	1977	1978
	1973=100					
Saskatchewan:						
Education price index - Indice des prix de l'enseignement	100.0	110.4	124.1	146.9	158.4	169.3
Salaries and wages - Traitements et salaires	100.0	109.2	122.3	146.5	158.7	169.7
- Teachers' salaries - Traitements des enseignants	100.0	109.2	122.2	147.1	158.6	169.7
- Caretakers' salaries - Salaires des concierges	..	..	..	..	..	..
Instructional supplies - Matériels didactiques	..	..	..	..	..	..
Fees and contractual services - Honoraires et services contractuels	100.0	102.6	116.3	140.6	149.7	158.5
School facilities, supplies and services - Installations, fournitures et services scolaires	..	..	..	..	..	..
Alberta:						
Education price index - Indice des prix de l'enseignement	100.0	109.3	128.6	142.9	152.9	166.0
Salaries and wages - Traitements et salaires	100.0	107.9	127.7	141.5	151.7	165.1
- Teachers' salaries - Traitements des enseignants	100.0	107.8	128.4	141.6	150.6	164.6
- Caretakers' salaries - Salaires des concierges	..	..	..	..	..	..
Instructional supplies - Matériels didactiques	..	..	..	..	..	..
Fees and contractual services - Honoraires et services contractuels	100.0	103.2	118.0	143.0	152.9	162.0
School facilities, supplies and services - Installations, fournitures et services scolaires	..	..	..	..	..	..
British Columbia - Colombie-Britannique:						
Education price index - Indice des prix de l'enseignement	100.0	111.6	129.1	144.7	155.1	164.3
Salaries and wages - Traitements et salaires	100.0	110.5	127.8	143.5	153.6	162.4
- Teachers' salaries - Traitements des enseignants	100.0	110.6	128.6	143.8	152.7	161.4
- Caretakers' salaries - Salaires des concierges	..	..	..	..	..	..
Instructional supplies - Matériels didactiques	..	..	..	..	..	..
Fees and contractual services - Honoraires et services contractuels	100.0	106.3	126.6	155.3	169.4	179.3
School facilities, supplies and services - Installations, fournitures et services scolaires	..	..	..	..	..	..

.. figures not available.
.. nombres indisponibles.